



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,364	10/11/2001	Edwin Park	TI-31696	9521

23494 7590 08/30/2005

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

KNAPP, JUSTIN R

ART UNIT	PAPER NUMBER
----------	--------------

2182

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,364

Applicant(s)

PARK, EDWIN

Examiner

Justin Knapp

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 2, 4, 5, 6, 8, and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by Nilsson et al (hereby Nilsson), USPN 6,189,052.

3. Referring to claim 1, Nilsson teaches:

a controller (figure 1, #2);

a configuration database coupled to the controller, said configuration database having stored therein a plurality of different configuration protocols for supporting a plurality of different peripheral devices (col 14, lines 29-31 teach a variety of protocols are supported);

a plurality of interconnection pads (figure 1, #6);

a memory coupled to the interconnection pads and controller, the memory is programmable by the controller in order to support any of the different peripheral devices (figure 3, #19, column 7);

a multiplexer coupled between the memory and the plurality of interconnection pads wherein the universal interface device concurrently interfaces with the plurality of different peripheral devices using time multiplexing of the plurality of interconnection pads (Abstract and columns 11-12).

4. Referring to claim 2, Nilsson teaches wherein the controller comprises a state machine (figure 1, #2 is a state machine).
5. Referring to claim 4, Nilsson teaches a programmable clock coupled to the memory or the configuration database (figure 2, #26).
6. Referring to claim 5, Nilsson teaches wherein the controller selects a configuration protocol from amongst the plurality of configuration protocols in the configuration database, and uses the selected configuration protocol to configure the memory in order to support the peripheral device from amongst the plurality that is coupled to the plurality of interconnection pads (configuration logic, #5 makes it possible to share i/o pins between different protocols, column 3).
7. Referring to claim 6, Nilsson teaches wherein the state machine includes a programmable routing and mapping scheme that allows the state machine to communicate with more than one peripheral device that is coupled to the plurality of interconnection pads (figure 2 shows the i/o processor able to map and route a variety of protocols from different peripherals, column 6).
8. Referring to claim 8, Nilsson teaches wherein the memory can be divided up by the state machine into two or more parts in order to support a peripheral device coupled to the interconnection pads that requires continuous transfer of data, the state machine switching between the two or more parts of the memory during data transfer to the peripheral device (column 5, line 35-end).
9. Referring to claim 9, Nilsson teaches wherein the state machine sets a portion of the memory to provide a tri-state control if one or more of the plurality of interconnection pads have to function as both an input and an output (column 10, line 30 and column 13, lines 50-62).

Response to Arguments

10. Applicant's arguments filed 06/20/05 have been fully considered but they are not persuasive.

Applicant argues in essence that: "*Nilsson does not teach a multiplexer for time multiplexing.*"

This argument is not found persuasive because Nilsson may not use the word "multiplexer" but he clearly anticipates the use of time multiplexing in his teachings. Since Applicant does not give any specific definition of time multiplexing in the Specification, the term "time multiplexing" is interpreted to mean that timers are used to allot periods of time for each of the peripheral devices to communicate via the interconnection pins with the I/O processor and memory. Examples of this time multiplexing can be found on columns 11 and 12 of Nilsson (such as column 11, lines 1-16 and column 12, lines 1-6). The Abstract also suggests time multiplexing is used by teaching; -- wherein an i/o processor core comprising at least one pin controller for reading and setting physical i/o pins, starting timers and generating interrupts for the for the i/o processor core, at least one timer for sampling i/o pins, setting i/o pins and generating interrupts for the i/o processor at well defined points of time, said i/o processor core providing instructions for controlling said at least one pin controller, said at least one timer and i/o pins, and an on chip RAM holding instructions for the i/o processor core...--.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Knapp whose telephone number is (571) 272-4149. The examiner can normally be reached on Mon - Fri 8:30 am - 5 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272-4083. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin Knapp
Examiner
Art Unit 2182

jrk



KIM HUYNH
PRIMARY EXAMINER
8/26/05